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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/917,625	07/31/2001	Hyun Jong Cha	MR2685-88	1560

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EXAMINER

FERRIS, DERRICK W

ART UNIT PAPER NUMBER

2663

DATE MAILED: 02/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/917,625

Applicant(s)

CHA, HYUN JONG

Examiner

Derrick W. Ferris

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 July 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8-14 is/are allowed.
- 6) ☒ Claim(s) 1 and 3-7 is/are rejected.
- 7) ☒ Claim(s) 2 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

1. **Claims 1, 5 and 7** are objected to because of the following informalities: Claim 1, line 18 lacks antecedent basis for the term “the divided files” since the claim does not further recite dividing a file into a plurality of files. In addition, “the file divided” at line 6 also lacks antecedent basis. As such, please note the first 103(a) rejection below using a reasonable but broad interpretation of “data file”. Claim 5, line 7 lacks antecedent basis for the term “the divided files” since the claim does not further recite dividing a file into a plurality of files. Claim 7, line 2 lacks proper antecedent basis for “said file structure portion”. The above limitation may be in reference to claim 6, which is not the parent claim.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1, 5, 6 and 7** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,966,374 A to *Rasanen* in view of “The File Structure of MicroComputer File Systems” to *Golden et al.* (“*Golden*”).

As to **claim 1**, see e.g., figure 2. DATA IN is construed as a “file size of data”.

Block 82 is a file divider for dividing a file size of data to be transmitted into a number of cells. In particular, the data (i.e., file of data) is placed into frames and then split based on a channel number assigned for the duration of the connection. The data is then sent

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over a radio channel, see e.g., column 5, lines 9-25. Before the data is sent over the radio channel, the data is formatted using blocks 80 and 81 which are collectively a plurality of first data converters for converting respective data in order to transmit the file divided by the file divider via a plurality of radio communication channels and a plurality of data transmitters for transmitting data respectively converted by the plurality of first data converters via a radio communications network. As such, using the same reasoning above, a plurality of data receivers and second data converts are taught as blocks 83 and 84. In addition, a file synthesizer is taught as block combiner 85. In particular, DATA 1 and DATA 2 are synthesized back to DATA OUT, which is the “original” high-speed signal.

Assuming that DATA IN is not clearly construed as a “data file” (and assuming applicant’s claims recite a data file), the examiner also notes the following obviousness rejection as well. In particular, the examiner proposes to modify *Rasanen* to clarify that the data is a data file. Hence the examiner notes that it would have been obvious to one skilled in the art prior to applicant’s invention to include data as part of a data file. In particular, *Golden* cures the above-cited deficiency since *Golden* teaches that stored data is a data file. In particular, one skilled in the art would have been motivated to transport data files for the purpose of communicating with microcomputers. *Golden* further teaches the above motivation e.g., at the top-left hand column on page 222.

As to **claim 5**, see similar rejection to claim 1. In addition, the examiner construes mobile phone terminal as a transmitting/receiving unit (i.e., applicant’s figure 2 shows a mobile phone but applicant’s figure 3 teaches a transmitter 14 as a mobile phone

terminal such that mobile phone and mobile phone terminal may not be equivalent).

Thus the examiner gives a reasonable but broad interpretation of mobile phone terminal.

As such to **claims 6 and 7**, *Rasanen* discloses is silent or deficient to the further structure of a file which includes a file structure portion that includes a file name, file size of the original file and contents of a sequence of a file, and a file data portion.

Golden teaches the above limitation at e.g., at top left-hand column of page 228 with respect to a DOS file system. In particular, a DOS file system has a file name, file size, and file attributes (e.g., contents of a sequence of a file). The file data portion is further included in the data portion of the file.

Thus examiner proposes to modify at least *Rasanen* to clarify that the above limitation at issue is well known in the art with respect to DOS files.

Thus examiner notes that the above limitation would have been obvious to one skilled in the art prior to applicant's invention. One skilled in the art prior to applicant's invention would have been motivated to combine the references teachings in order to use DOS files. Thus *Golden* teaches the above motivation at e.g., bottom right-hand column on page 227 since PC-DOS files are the most commonly used format.

4. **Claim 3** is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,966,374 A to *Rasanen* in view of "The File Structure of MicroComputer File Systems" to *Golden et al.* ("*Golden*") and in further view of U.S. Patent No. 5,771,229 A to *Gavrilovich*.

As such to **claim 3**, *Rasanen* discloses retransmitting the data in the event of a failure but leaves it open on how such retransmitting occurs.

Gavrilovich teaches the above limitation at e.g., column 9, lines 25-37 with respect to dynamic allocation of bandwidth for RF channels.

Thus examiner proposes to modify at least *Rasanen* to clarify that the above limitation at issue is well known in the art with respect to fault recovery.

Thus examiner notes that the above limitation would have been obvious to one skilled in the art prior to applicant's invention. One skilled in the art prior to applicant's invention would have been motivated to combine the references teachings in order to transmit information in parallel (i.e., simultaneously) as well as provide dynamic bandwidth. *Gavrilovich* teaches the above limitation e.g., at column 9, lines 9-36.

5. **Claims 1, 4 and 5** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,192,412 B1 to *Cantoral et al.* ("*Cantoral*") in view of U.S. Patent No. 6,460,087 B1 to *Saito et al.* ("*Saito*") and "Internet Services on Enhanced CDPD Systems" to *Acosta et al.* ("*Acosta*").

As such to **claim 1**, *Cantoral* discloses in figures 1 and 4 a file divider as filter splitter 8; a plurality of first data converters and a plurality of data transmitters as file transmitter 12, transmission controller 21 or network access input unit 40; a plurality of data receivers and a plurality of second data converters as network output 42; and a file synthesizer as file receiver and combiner 15 which is also network access output 42. The data file is further transmitted simultaneously over network 13. In particular, figure 4 shows a plurality of first data converters and data transmitters with respect to each section 1...N and the network access input which transmits data simultaneously or in parallel. As the information is transmitted simultaneously, see e.g., column 1, lines 55-60, one

concludes that a plurality of data converters and transmitters are taught, one for each connection (i.e., note multiple inputs and multiple outputs for network access input 40). As such, a plurality of data receivers and a plurality of second data converters are also taught in figure 4 given the same reasoning.

Cantoral is silent or deficient to the further limitation that the simultaneously connections are radio channels. In particular, *Cantoral* teaches a general network 13 capable of transmitting file sections simultaneously.

Saito teaches the further recited limitation above at e.g., the background (and not necessarily the main embodiment) with respect to figure 2. In particular, note that the figure 2 shows that a data file is transmitted simultaneously over two connections (i.e., connections 1 and 2), see e.g., column 1, lines 53-65. However, *Saito* may also not be clear that the two connections (i.e., channels) are radio channels. *Acosta* further teaches that it is well known in the art to send data files over multiple radio channels, see e.g., the abstract on page 87. In particular, *Acosta* teaches that it is well known in the art that file transfers occur over multiple CDPD channels, which are radio channels.

The proposed modification of the above-applied reference(s) necessary to arrive at the claimed subject matter would be to modify *Cantoral* by clarifying that the simultaneous data sent is sent over channels or more particularly over radio channels such as CDPD channels.

As such, examiner notes that it would have been obvious to one skilled in the art prior to applicant's invention to include the above limitation. In particular, the motivation for modifying the reference or to combine the reference teachings would be to improve

the performance in terms of delay and capacity. In particular, both *Saito* and *Acosta* cures the above-cited deficiency by providing a motivation found at e.g., column 1, lines 56-61 of *Saito* and Section 2 on page 87 of *Acosta*. Second, there would be a reasonable expectation of success since *Cantoral* teaches dividing and transporting the files at the application layer and at least *Acosta* teaches transporting the files at a physical layer (i.e., the two layers are independent of one another). Thus the references either in singular or in combination teach the above claim limitation(s).

As such to **claim 4**, *Cantoral* discloses that processors use software to control at least the central processing, see e.g., column 3, lines 1-17. Therefore it would have been obvious to one skilled in the art prior to applicant's invention to control the file divider and file synthesizer in software given the above motivation. Examiner also notes implementing instructions in software as a matter of design choice.

As to **claim 5**, see similar rejection to claim 1. In addition, the examiner construes mobile phone terminal as a transmitting/receiving unit (i.e., applicant's figure 2 shows a mobile phone but applicant's figure 3 teaches a transmitter 14 as a mobile phone *terminal* such that mobile phone and mobile phone terminal may not be equivalent).

Thus the examiner gives a reasonable but broad interpretation of mobile phone terminal.

6. **Claim 3** is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,192,412 B1 to *Cantoral et al.* ("*Cantoral*") in view of U.S. Patent No. 6,460,087 B1 to *Saito et al.* ("*Saito*") and "Internet Services on Enhanced CDPD Systems" to *Acosta et al.* ("*Acosta*") in further view of U.S. Patent No. 5,771,229 A to *Gavrilovich*.

As such to **claim 3**, *Cantoral* discloses retransmitting the data in the event of a failure but leaves it open on how such retransmitting occurs. As such, *Cantoral* may not be clear in the further limitation of using a plurality of radio reserve channels to replace respective inferior communication channels when communication inferiorities occur in the plurality of radio communication channels.

Gavrilovich teaches the above limitation at e.g., column 9, lines 25-37 with respect to dynamic allocation of bandwidth for RF channels.

Thus examiner proposes to modify at least *Cantoral* to clarify that the above limitation at issue is well known in the art with respect to fault recovery.

Thus examiner notes that the above limitation would have been obvious to one skilled in the art prior to applicant's invention. One skilled in the art prior to applicant's invention would have been motivated to combine the references teachings in order to transmit information in parallel (i.e., simultaneously) as well as provide dynamic bandwidth. *Gavrilovich* teaches the above limitation e.g., at column 9, lines 9-36.

7. **Claims 6 and 7** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,192,412 B1 to *Cantoral et al.* ("*Cantoral*") in view of U.S. Patent No. 6,460,087 B1 to *Saito et al.* ("*Saito*") and "Internet Services on Enhanced CDPD Systems" to *Acosta et al.* ("*Acosta*") in further view of "The File Structure of MicroComputer File Systems" to *Golden et al.* ("*Golden*").

As such to **claims 6 and 7**, *Cantoral* discloses transmitting files but is silent or deficient to the further structure of a file which includes a file structure portion that

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includes a file name, file size of the original file and contents of a sequence of a file, and a file data portion.

Golden teaches the above limitation at e.g., at top left-hand column of page 228 with respect to a DOS file system. In particular, a DOS file system has a file name, file size, and file attributes (e.g., contents of a sequence of a file). The file data portion is further included in the data portion of the file.

Thus examiner proposes to modify at least *Cantoral* to clarify that the above limitation at issue is well known in the art with respect to DOS files.

Thus examiner notes that the above limitation would have been obvious to one skilled in the art prior to applicant's invention. One skilled in the art prior to applicant's invention would have been motivated to combine the references teachings in order to use DOS files. Thus *Golden* teaches the above motivation at e.g., bottom right-hand column on page 227 since PC-DOS files are the most commonly used format.

Allowable Subject Matter

8. **Claims 8-14** are allowed.
9. **Claim 2** is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Derrick W. Ferris whose telephone number is (571) 272-3123. The examiner can normally be reached on M-F 9 A.M. - 4:30 P.M. E.S.T.

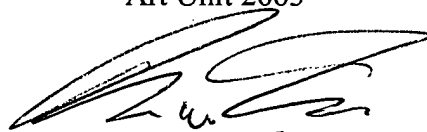
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on (571)272-3139. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


DWF

Derrick W. Ferris
Examiner
Art Unit 2663


Derrick W. Ferris
2/5/05